

cyanhydric acid; (2) that it exists in the hypocotyl, plumule, and root, since when these organs are detached from the cotyledons and crushed in a fresh solution of emulsin the odor of bitter almonds is developed.

Finally, I have proved that germination does not change the localization of these two substances. The emulsin, in particular, does not change its position in the seedling, or only after having undergone certain changes which modify its nature and properties.—M. L. LUTZ, *Paris*.

SYNONYMY OF MUCILAGO SPONGIOSA (Leys.).

THE earliest reference to any form of Myxomycetes appears in a citation by Haller from "Phil. Bonanni, Recreationes mentis & oculis, Rom. anno 1684." Its synonymy may be presented in the order of time as follows:

1. *Mucilago filamentosa ramosa* Bonanni, Recreationes 1684.
2. *Mucilago crustacea alba* Micheli, Nov. Pl. Gen. 1729; Battarra, Fung. Hist. 1755.
3. *Mucilago crustacea alba*, α . β . γ . Haller, Eu. Stirp. Helv. 1742.
4. *Mucor crustaceus, spongiam simulans, cortice in pulverem fatiscente* Gleditsch, Meth. Fung. 1753.
5. *Mucilago*. Adanson, Fam. des Pl. 1763.
6. *Mucilago alba, crustacea & filamentosa*, α . β . γ . Haller, Hist. Stirp. Helv. 1768.
7. *Byssus bombycina* Retzius, Act. Holm. 1769.
8. *Byssus floccosa* Schreber, Spic. Lips. 1771.
9. *Mucor spongiosus* Leysser, Fl. Hal. 1783.
10. *Mucilago crustacea* Schrank, Bay. Fl. 1789.
11. *Reticularia alba* Bulliard, Champ. 1791.
12. *Spumaria mucilago* Gmelin, Syst. Veg. 1791.
13. *Reticularia ovata*, var. Withering, Bot. Arr. 1792.
14. *Spumaria cornuta* Schumacher, Eu. Pl. 1803.
15. *Spumaria alba* De Candolle, Fl. Fr. 1805.

In no. 6, as in no. 3, Haller's species is much more extensive than in the synonymy elsewhere; it includes three of Micheli's species which he considers all forms or varieties of one. The second form, " β . *Mucilago alba, ramosa, radices arborum simulans* Micheli, p. 216, t. 96, f. 3" is considered by Fries to be a representation of the plasmodium of some species; it is under this form the citation from

Bonanni occurs. What is very singular, however, is that Rostafinski refers this extract to Bonamy, Fl. Nannetensis, 1782.

The synonymy shows clearly that after the Linnean date of 1753 *Mucilago* is used generically by Battarra, Adanson, Haller, and Schrank. This is certainly sufficient to establish and maintain its use as the proper generic term.

In seeking to establish the specific name we reach the following result. *Byssus bombycina* of Retzius is admitted by Rostafinski evidently on the authority of Schrank, Bay. Flora 638. Retzius, Bot. Obs. fasc. 1:34, states distinctly that *Byssus bombycina* is *Byssus floccosa* of Schreber. Persoon, Synopsis 696, accepts them as identical and refers them to his genus *Dematium*. Fries, S. M. 3:379, considers them merely hyphæ. In fact, Schrank's *Mucilago crustacea* at most can apply only to forms β and γ of Haller, which are outside the species. It is strange Rostafinski did not quote this name as a synonym.

The next name in order of time is *Mucor spongiosus* Leysser, Flora Halensis, 2 ed. 1783. The reference is to the page and figure of Micheli, which is universally accepted as representing the species, and the description also accords perfectly with it. This citation escaped Rostafinski altogether, and the reason for it is very curious. Rostafinski's synonymy in general is copied bodily from Fries S. M., and from its index. *Mucor spongiosus* does indeed occur in the index, but a slip of pen or of type refers it to Leers instead of Leys., and of course it could not be verified.

So far, then, as we have been able to trace the synonymy the correct name for the *Reticularia alba* of Bulliard, *Spumaria mucilago* of Persoon, and *Spumaria alba* of De Candolle, is *Mucilago spongiosa* (Leys.).—A. P. MORGAN, Preston, O.